

INCH-POUND

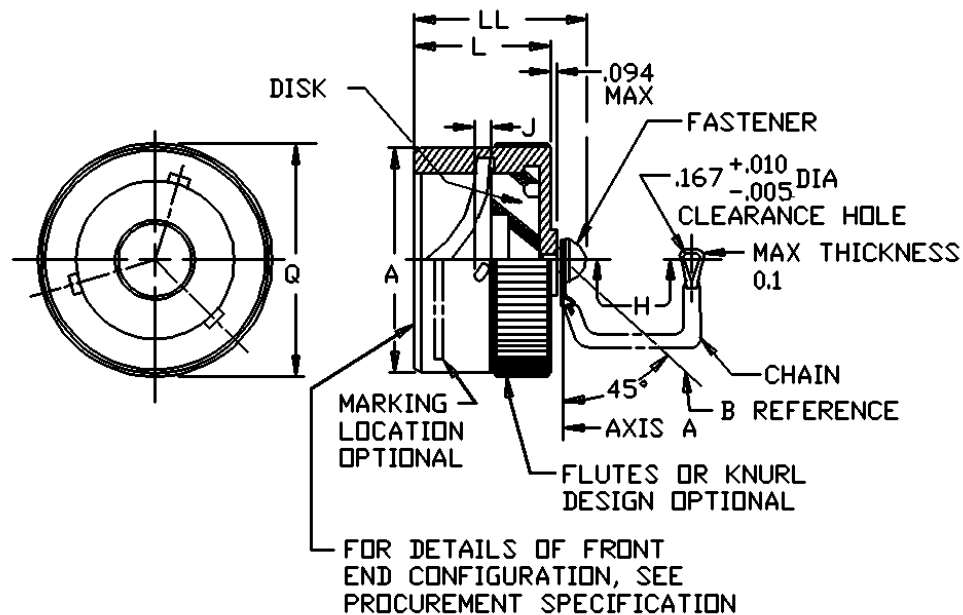
MS27502J  
12 July 2002  
SUPERSEDING  
MS27502H  
31 March 1988

## DETAIL SPECIFICATION SHEET

### CONNECTORS, ELECTRICAL, CIRCULAR, COVER, PROTECTIVE, RECEPTACLE, BAYONET COUPLING, SERIES I

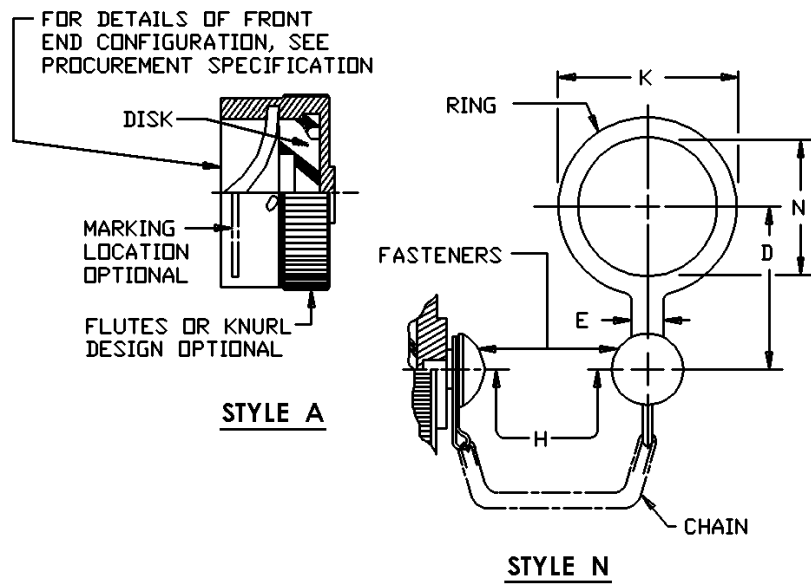
This specification is approved for use by all Departments  
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein  
shall consist of this specification and MIL-DTL-38999.



### STYLE C

FIGURE 1. Cover.



| Shell<br>size | A<br>max<br>dia | D    |      | E<br>min<br>ring<br>throat | H<br>+.50, -.25<br>Standard<br>chain length | J<br>±.015 | K<br>max<br>dia | L<br>max | LL<br>max | N<br>min<br>dia | Q<br>max<br>dia |
|---------------|-----------------|------|------|----------------------------|---|------------|-----------------|----------|-----------|-----------------|-----------------|
|               |                 | min  | max  |                            |   |            |                 |          |           |                 |                 |
| 9             | .82             | .71  | 1.03 | .23                        | 3.0   | .105       | 1.03            | .82      | 1.1       | .70             | .86             |
| 11            | .94             | .74  | 1.13 |                            |   |            | 1.21            |          |           | .84             | .98             |
| 13            | 1.10            | .93  | 1.23 |                            | 3.5   |            | 1.40            |          |           | 1.01            | 1.16            |
| 15            | 1.22            | .99  | 1.29 |                            |   |            | 1.60            |          |           | 1.14            | 1.28            |
| 17            | 1.34            | 1.05 | 1.35 |                            |   |            | 1.70            |          |           | 1.26            | 1.41            |
| 19            | 1.46            | 1.11 | 1.41 |                            | 1.80  |            | 1.39            |          |           | 1.52            |                 |
| 21            | 1.58            | 1.18 | 1.47 |                            | 4.0   | 1.92       | 1.51            |          |           | 1.65            |                 |
| 23            | 1.70            | 1.24 | 1.54 |                            |   | 2.10       | 1.64            |          |           | 1.77            |                 |
| 25            | 1.83            | 1.30 | 1.60 |                            |   | .138       | 2.20            |          |           | 1.76            | 1.89            |

FIGURE 1. Cover - Continued.

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| Inches | mm   | Inches | mm   | Inches | mm   | Inches | mm   | Inches | mm    |
|--------|------|--------|------|--------|------|--------|------|--------|-------|
| .005   | 0.13 | .74    | 18.8 | 1.13   | 28.7 | 1.39   | 35.3 | 1.77   | 45.0  |
| .010   | 0.25 | .82    | 20.8 | 1.14   | 29.0 | 1.40   | 35.6 | 1.80   | 45.7  |
| .015   | 0.38 | .84    | 21.3 | 1.16   | 29.5 | 1.41   | 35.8 | 1.83   | 46.5  |
| .030   | 0.76 | .86    | 21.8 | 1.18   | 30.0 | 1.46   | 37.1 | 1.89   | 48.0  |
| .094   | 2.39 | .93    | 23.6 | 1.21   | 30.7 | 1.47   | 37.3 | 1.92   | 48.7  |
| .1     | 2.5  | .94    | 23.9 | 1.22   | 31.0 | 1.51   | 38.4 | 2.10   | 53.3  |
| .105   | 2.67 | .98    | 24.9 | 1.23   | 31.2 | 1.52   | 38.6 | 2.20   | 55.9  |
| .138   | 3.51 | .99    | 25.1 | 1.24   | 31.5 | 1.54   | 39.1 | 3.0    | 76.2  |
| .167   | 4.24 | 1.01   | 25.7 | 1.26   | 32.0 | 1.58   | 40.1 | 3.5    | 88.9  |
| .23    | 5.8  | 1.03   | 26.2 | 1.28   | 32.5 | 1.60   | 40.6 | 4.0    | 101.6 |
| .25    | 6.4  | 1.05   | 26.7 | 1.29   | 32.8 | 1.64   | 41.7 |        |       |
| .50    | 12.7 | 1.10   | 27.9 | 1.30   | 33.0 | 1.65   | 41.9 |        |       |
| .70    | 17.8 | 1.1    | 28.0 | 1.34   | 34.0 | 1.70   | 43.2 |        |       |
| .71    | 18.0 | 1.11   | 28.2 | 1.35   | 34.3 | 1.76   | 44.7 |        |       |

## NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Finish: See MIL-DTL-38999.
4. Not for space born applications.

FIGURE 1. Cover - Continued.

## REQUIREMENTS:

Dimensions and configuration: See figure 1. Interface dimensions shall conform to MIL-DTL-38999.

## Material:

Cover – Impact extruded or machined aluminum alloy.

Disk – Silicone or fluorosilicone elastomer.

Ring – Stainless steel passivated, .030 max thickness.

Chain – Stainless steel, passivated.

Fastener – Stainless steel, passivated.

Mating connectors: MIL-DTL-38999 Series I, and MIL-C-27599 Series I.

Disk shall be bonded, or mechanically retained.

Chain shall rotate freely on cover fastener.

The protective cover and chain assembly shall withstand a static tensile load of 35 pounds applied along the B reference line for 5 minutes.

Fastener tensile strength: Both axial and longitudinal directions shall be 25 pounds. The load shall be applied to the end of the chain.

## Qualification:

Examination of product.  
 Mating and unmating forces.  
 Humidity.  
 Salt spray (corrosion).  
 Fastener tensile strength (see requirement).  
 Altitude immersion.

Group A sampling inspection. 100% inspection is not applicable. Sampling inspection shall be in accordance with table I:

TABLE I. ~~Group A sampling plan.~~

| Lot size       | Sample size |
|----------------|-------------|
| 1 to 13        | 100 percent |
| 14 to 150      | 13 units    |
| 151 to 280     | 20 units    |
| 281 to 500     | 29 units    |
| 501 to 1,200   | 34 units    |
| 1,201 to 3,200 | 42 units    |

Part or Identifying Number (PIN) example:

MS27501 A 15 C L

MS number \_\_\_\_\_

Finish \_\_\_\_\_

Shell size \_\_\_\_\_

Style \_\_\_\_\_

C – Chain  
 N – With Chain and Ring  
 A – Without Chain

Length \_\_\_\_\_

(Omit for style A or styles C and N with standard chain length)  
 L – 5 inch chain in lieu of standard length

CONCLUDING MATERIAL

Custodians:

Army - CR  
Navy - AS  
Air Force - 11  
DLA - CC

Preparing activity:

DLA - CC

(Project 5935-4401)

Review activities:

Army - AR, MI  
Navy - EC, MC, OS  
Air Force - 19, 99  
DLA - IS